

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Claims 1, 2, 8, 10-12 and 18-20 are currently being amended.

This amendment changes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending the claims as set forth above, claims 1-20 are now pending in this application.

Claim Rejections under 35 U.S.C. § 112

Claims 8 and 18 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In response, Applicant amends claims 8 and 18. Claims 8 and 18 now refer to a mobile bit rate. Support for the amendment can be found on at least page 20 of the specification. Accordingly, Applicant respectfully requests that that the rejection be withdrawn and claims 8 and 18 be allowed.

Claim Objections

Claims 10 and 20 were objected to under 37 CFR § 1.75(c) as being in improper form for a multiple dependent claim. In response, Applicant amends claims 10 and 20 to depend from claim 8 and claim 18 respectively. Thus, Applicant respectfully request that objection be withdrawn and claims 10 and 20 be allowed.

Claim Rejections under 35 U.S. § 102

Claims 11-14 were rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent Publication No. 2004/0209624 (“Rune et al.”). In response, without agreeing or acquiescing to the rejection, Applicant amends independent claim 11 to further define the invention.

Further, the rejection is respectfully traversed below and the Applicant submits that claims 11-14 are allowable for at least the following reasons.

Applicant relies on M.P.E.P. § 2131, entitled “Anticipation – Application of 35 U.S.C. § 102(a), (b) and (e)” which states, “ a claim is anticipated only if each and every element set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” Applicant respectfully submits that Rune et al. does not describe each and every element of the claims.

Claim 11 is directed toward a control method for a wireless communications network. For at least one given base station, the method calculates a load for each mobile served by the base station and for each new candidate mobile from quantities related to attenuations measured between mobiles and base stations and/or to the signal to interference and noise ratio threshold. Thus, the load calculation and evaluation is performed for each base station in the network according to a decentralized approach. In addition, the load calculation may be performed for the mobiles that are served as well as for the mobiles that are seeking to be served. Further, according to the claimed invention, the load calculation does not depend on the transmit power of the mobiles. In addition, the claimed method evaluates a working condition representing the feasibility of power allocation to the mobiles by the base station. Then, the method decides upon the treatment of the new candidate mobiles.

In contrast, Rune et al. disclose a load control algorithm which compares an uplink load to a threshold using a centralized approach. The uplink load (\overline{L}_j) , given by equations (8) and (6) in Rune, clearly depend on the path losses and on the Carrier to Interference Ratio (CIR). Thus, the uplink load (\overline{L}_j) depends on all the mobiles of the network, independent of their serving station. Accordingly, the control load algorithm taught by Rune et al. uses a centralized approach (See ¶¶ 0008, 0043 and 0045.) According to the centralized approach taught in Rune, each base station cannot be processed independently of the others. Therefore, Rune et al. does not teach, suggest or disclose a method including the step of calculating a load for at least one given base station for each mobile served by the base station and each new candidate mobile as claimed in amended claim 11.

Further, Rune et al. fails to disclose, teach or suggest that the load calculation is performed specifically for each mobile served by the station and for each new candidate mobile as claimed in claim 11. Instead, in Rune the load calculation is made for all the mobiles of the network, and therefore only provides a load indicator representing the load of the network. This is quite different from the load calculation of amended claim 11 which is performed for each mobile served by the station and for each new candidate mobile and which therefore provides a load indicator representing the load of the given base station.

Accordingly, Applicant respectfully submits that Rune et al. does not disclose, teach or suggest all the limitations of claim 11. Thus, reconsideration and withdrawal of the rejection is respectfully requested. In addition, claims 12-14 depend from independent claim 11 and are allowable for that reason. Further, Andersin et al. does not cure the deficiencies of Rune et al. Therefore, claims 15-20 that depend from claim 11 are also allowable.

Claim Rejections under 35 U.S.C. § 103

Claims 1-3 and 5 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Andersin et al., *Soft and Safe Admission Control in Cellular Networks*, IEEE/ACM Transactions on Networking, Vol. 5., No. 2, April 1997 ("Andersin et al.") in view of Rune et al. Claim 4 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Andersin et al. in view of *Korhonen*, Introduction to 3G Mobile Communications, Artech House, 2001 ("Korhonen"). Claims 6 and 7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Andersin et al. in view of Rune et al. in further view of U.S. Patent No. 6,775,233 ("Kumaran et al."). Claims 8-9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Andersin et al. in view of Rune et al. and in further view of U.S. Patent Publication No. 2002/0193118 ("Jain et al."). Claim 15 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Rune et al. in view of Andersin et al. Claims 16-17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Rune et al. in view of Andersin et al. and in further view of Kumaran et al. Claims 18-19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Rune et al. in view of Jain et al.

In response, without agreeing or acquiescing to the rejection, Applicant amends claim 1 to further define the invention. Further, the rejection is respectfully traversed below and the Applicant submits that claims 1-9 and 15-19 are allowable for at least the following reasons.

Applicant relies on M.P.E.P. § 2143, which states that to establish a prima facie case of obviousness, three basic criteria must be met. First there must be some suggestion or motivation in the prior art to modify the reference. Second, there must be a reasonable expectation of success. Third, the prior art must teach or suggest all the claim limitations.

Applicant respectfully submits that the references cited by the Examiner do not teach or suggest all the limitations of claim 1 as amended. Claim 1 discloses a control device for a wireless communications network. The control device includes a calculator of quantities related to attenuations measured between mobiles and base stations, and/or to the signal to interference and noise ratio threshold and a decision device with regard to the processing of new candidate mobiles. The decision device and calculator operate together according to a predefined mechanism. For at least one given base station, the mechanism includes a load calculation function for each mobile and an evaluation from the calculated loads of a working condition, representing the feasibility of the power allocation to mobiles by the base station.

In contrast, in Andersin et al., the performance of N-IAC type algorithms, for which a decision to admit a new mobile is made instantaneously depending on the system state, is compared to IAC type algorithms, according to which a new mobile may interact with one or more possible channels before an admission decision is made. IAC algorithms are “test” type algorithms. “Test” type algorithms are implemented so that a new mobile is temporarily admitted until a decision is made. Both the N-IAC and IAC approach are dissimilar to the approach embodied in amended claim 1.

As indicated in the present application on page 10, “test” type algorithms cannot be used in practice, particularly in real systems. Andersin teaches that N-IAC type algorithms are problematic and subject to errors. (See pp. 256, third paragraph, 258 and 262.) Andersin further indicates that IAC type algorithms, which are “test” type algorithms, require too much time for being executed. (See p. 256, right column “*SAS and DCP-ALP have a slow*

convergence rate which makes their strict version impractical”; p. 257, § III, right column, “A primary objective of an admission control algorithm is a fast execution time”; p. 260, left column, “A main concern about the SAS algorithm is its convergence rate, that is, how many DCPC phases are required to reach a decision. For practical use, it should be very low; ideally only one phase”).)

Further, Neither the N-IAC algorithm nor the IAC algorithm rely on a load calculation and on the evaluation of a working condition as claimed in amended claim 1. In addition, the invention as claimed in claim 1 differs from the IAC algorithms disclosed in Andersin et al. in that the claimed invention as claimed in claim 1 is adapted to make a decision to admit a mobile without delay.

The invention as claimed in claim 1 further differs from N-IAC type algorithms in that the claimed control device, unlike the N-IAC device, does not take into account the transmission powers of mobiles, which vary and highly depend on the state of the network at a given time. Andersin et al. discloses that N-IAC type algorithms depend on the transmit powers of the mobiles (see equation (7)), and therefore fluctuate over the time, which makes the technique less accurate. Moreover, Andersin et al. does not disclose, teach or suggest a control device having a mechanism comprising, for at least one given base station, a load calculation function for each mobile served by the base station and for each new candidate mobile, depending on said quantities but not depending on the transmit powers of said mobiles, and an evaluation from the calculated loads of a working condition, representing the feasibility of the power allocation to mobiles by the base station.

Accordingly, Applicant respectfully requests that the rejection be withdrawn and amended claim 1 be allowed. Further, Rune et al., Korhonen, Kumaran et al. and Jain et al. fail to cure the deficiencies of Andersin et al. Therefore, claims 2-10 that depend from claim 1 are allowable for at least that reasons set forth above.

In addition, Applicant notes that there is no evidence in the prior art that suggests or provides motivation for the combination of Andersin et al. and Rune et al. In fact, based on the conclusions drawn in Andersin et al. a person of ordinary skill in the art would have been

deterred from combining Rune et al. with Andersin et al since Andersin et al. disclosed two vastly different algorithms and their technical drawbacks.

Conclusion

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date

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By

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